

Claims

1. Apparatus for determining nominal pulse duration values in a signal encoded with an AES3 data stream, comprising:

a first circuit for measuring duration of each pulse of the signal and providing a sequence of duration values, and

a second circuit for detecting a maximum duration value, corresponding to duration of three bit cells, and providing first and second duration values corresponding to one bit cell and two bit cells respectively.

2. Apparatus according to claim 1, wherein the second circuit includes a downcounter and a comparator for detecting the maximum duration value and a lookup table providing the first and second duration values.

3. Apparatus according to claim 1, including a third circuit for receiving the maximum duration value and the first and second duration values and comparing the measured duration value of each pulse with the maximum duration value, the first duration value and a third duration value and providing a corresponding output.

4. Apparatus for extracting sample data values from a signal encoded with an AES3 data stream, comprising:

a first circuit for measuring duration of each pulse of the signal and providing a sequence of duration values, and

a second circuit for receiving at least one nominal pulse duration value, corresponding to nominal duration of a predetermined number of bit cells, and comparing the measured duration value with at least one nominal pulse duration value to determine the duration of the pulse relative to the nominal pulse duration value.

5. Apparatus according to claim 4, wherein the second circuit receives three nominal duration values, corresponding to nominal durations of one bit cell, two bit cells and three bit cells respectively, compares each measured duration value

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with at least one of the nominal duration values, and provides an output depending on the comparison.

6. Apparatus according to claim 5, wherein the second circuit has first, second and third outputs, which it asserts depending on whether the measured duration value matches one bit cell, two bit cells or three bit cells in nominal duration, and the apparatus further comprises a means for extracting sample data values based on the outputs of the second circuit.

7. A method for determining nominal pulse duration values in a signal encoded with an AES3 data stream, comprising:

measuring duration of each pulse of the signal and providing a sequence of duration values, and

detecting a maximum duration value, corresponding to duration of three bit cells, and providing first and second duration values corresponding to one bit cell and two bit cells respectively.

8. A method according to claim 7, including receiving the maximum duration value and the first and second duration values and comparing the measured duration value of each pulse with the maximum duration value, the first duration value and a third duration value and providing a corresponding output.

9. A method for extracting sample data values from a signal encoded with an AES3 data stream, comprising:

measuring duration of each pulse of the signal and providing a sequence of duration values,

receiving at least one nominal pulse duration value, corresponding to nominal duration of a predetermined number of bit cells, and

comparing the measured duration value with at least one nominal pulse duration value to determine the duration of the pulse relative to the nominal pulse duration value.